

problem came. But, I do have that. We did do an extract, so we could share some of that with you.

David Krech, FCC

Okay. Any other questions from the audience? Being no further questions from the audience, we will move on to the "closing ceremonies," as I prefer to call them. I appreciate everybody's patience. I know this has been a long process that I believe — you know, speaking personally it's been a very useful process. I hope that's been true for the states. We're going to have a two-part closing ceremony. We're going to allow the modelers to give any sort of concluding remarks that they would like to make. Ben's trying to run away, but I was going to let him go first. You told me 4:30 and it's 4:20, so you've got a few minutes. Let Ben Johnson make any concluding remarks he wants to make about his model, and then we'll give a chance to the BCPM and Hatfield people. And then I have a few administrative comments to make before we wind this up and let everybody go home and think deep thoughts about models.

Ben Johnson, Ben Johnson Associates

Okay, since I didn't think I'd have enough time, I didn't prepare any comments, but very briefly, I think our model has some strong advantages that I hope the other participants have come to recognize. In particular, I think it has strengths in terms of its flexibility, its ability to deal with a wide array

of issues. One issue in particular came up in the last two days which is market share. But, in fact, if you pursue that issue of market share you'll find we have much depth in our flexibility below the superficial level. We have the ability to deal with market share distinctly for business and for residence, for the different zones within the wire center. You can do it in wire center by wire center. So, these kinds of entry scenarios and kinds of issues that are really very important, you can deal with in that type of a model structure. In none of my comments am I suggesting the other models couldn't be improved to take these characteristics, I'm just trying to point out some strengths I think we do have.

Similarly, I think, and we've heard a lot about lock cells and formulas and so on. We don't have any of that. Everything in our model is readily available. The one thing we have done which was hinted at, is what you're seeing is a model that deals with one wire center at a time. We have additional software we use to generate a large data set, but we can make that available to the Joint Board staff and to others under a license agreement. We just didn't feel comfortable giving that away since that's part of our bread and butter is doing studies for regulators. And when we do them, the fact that we can do them quickly and efficiently made it feasible to give away the version of the software we've distributed.

In think in general, as far as input values, I think we've seen over the discussion that in general our input values are

within the range that's been discussed and I think are probably come closer to truth than either of the other two that you've been hearing about. But I do not claim that every one of our input values is as good as it can get. I've had some good ideas listening the last two days, and I think there's some improvements we can make, and I think there's certainly improvements everyone can make.

I'll remind you of something we mentioned the other day which I think is in some areas in particular, such as the installation of cable, the ability to break that activity down into time and the cost of that time is a very important attribute for generalizing to other — to the smaller companies, and when you start having real money at stake. Because there are differences that are going to be very hard to capture in terms of how long it takes to place cable or other major items like that that are very significant if you go to a state like Alaska and if you build a model in which you've been ignoring that and you have two or three years in which all you're doing is gathering data and verifying numbers on a round-dollars-per-installed-foot basis, you're going to find you don't have any ability to generalize to the unusual places, the remote parts of Minnesota, Alaska and the like.

So, in general I think I would remind of one other comment I made early on, in my opening comments the other day, which is, I think all three of these models are close enough to where they need to be that they could meet the Joint Board's purposes. I

think the real work that needs to be done over the next few months is honing in on the input values and honing in on the specific details of how you want to see the models improved in order to meet your needs. Thank you.

David Krech, FCC

Thank you. And, thank you, Ben for coming up to Washington and letting us know about your model and adding some new interest that we didn't know about, I guess probably even like to two weeks ago, but it's been very useful. I guess next we'll let Bob Mercer talk about the Hatfield, as I know he also has a plane or a train or something to catch and is on a time limitation here.

Robert Mercer, Hatfield Associates

Well, I guess what I've heard in the last three days really, one day of tutorials and two days of workshops, I've heard the models scrutinized against a large number of different criteria. I've certainly heard, as I'm sure you have, many more comments directed towards the Hatfield Model, many negative, many positive, but many negative as well. And I'd like to address those for a second and say, why so much attention on this particular model? And I think a couple of things that really need to be kept in mind by the Joint Board as it moves forward. One is because many of these comments, most of these comments, were made by the telephone companies or people working for them, and the results are clearly less favorable. They do show a

lower cost than does the Benchmark Cost Model. Second of all, important to remember, the Hatfield Model has been subject to far more scrutiny over the last six months because it's been submitted in arbitration proceedings in 30 states or so. And so, as Dan already mentioned, it's been deposed and data requested and everything under the sun. And as Glen Brown said kind of euphemistically yesterday, it's made its way into the arbitration results.

Many comments, I would comment today, and I again would suggest people need to keep this in mind, have been addressed towards old versions of the model, and I mean not just 2.2, but even back as far as 2.0, Greenfield model of some time in the past. I would say I believe, and you're going to have to see if you agree, I believe it's fair to say that the new release of the model addresses every valid concern that I've heard raised over the last three days — and more. And I would hope that you would make comparisons based on the new version of the model. I think you'll find it's pretty exciting as far as its capabilities.

The other thing I'd comment is that many of the comments have addressed inputs, not the model logic. For instance, comments like "the Hatfield Model is wrong because it uses the wrong cost of capital" is not really a comment about the model, but about the inputs. And the model does have a very large number of inputs that can be set by the user. And so, I think the Joint Board will have the challenge of differentiating concerns it may have about the model from concerns it has about

the inputs. And if it's input issues, then obviously all of the discussion we've just had about the importance of getting inputs comes to bear. If you find bona fide — I should say model changes that you believe are appropriate, we will, within reason and the time frame allowed, certainly make those changes. But I think you'll find when you look at the model that things have been addressed.

If I compare the Hatfield Model with the other models, since ultimately the purpose of these workshops is to address the different submitted models, by and large what I heard about BCPM is that it plays a pretty good game of catch-up with where we were in 2.2. It apparently has jumped ahead in some areas of 2.2, but interestingly enough, we've addressed exactly those same areas in actually a very similar way. And I think what that translates into, again, is just an emphasis one more time. If you then look at the two models side by side in new releases, it's even more true that the inputs are really going to count. And, therefore, there really has to be a good input process. And so, since we've just finished discussing that in the last panel, I won't say much more about that, but I have a great deal of problem, for instance, with the sort of proprietary input process that BCPM utilized, because nobody is going to be able to scrutinize those results, and if you were here for these last couple of days, you heard a fair amount of incredulity about at least the switching costs that seem to result from that kind of process.

So, that's got to be, perhaps, the main tough task of the Joint Board is, what do you do given that these models have been modularized — or not modularized but have been turned into a set of inputs, what do you do about those inputs? There are two outstanding differences between the models, I think. And one of them, and I would just encourage the people that have to make this decision, you've got an interesting decision. In the loop plant there is a bit difference right now in the sense that the BCPM deploys fiber very, very close to customers in very rural areas. And you are going to have to decide is that overkill or not, in order to avoid the long loop problem, given that long loop design has been around for 50 years and has been extensively utilized. In the last loop survey, I think 20% of customers were still served by such long loops. There is a decision to be made. The Hatfield Model can certainly make that change. We did not believe that was an appropriate change to make for providing universal service.

There is also possibly, and it came up a couple of times, but not in any detail, there are possibly wire based subscriber carrier technologies that might form a cheaper interim between the two, and again, depending on what is believed to be right, that to us also seems to go beyond universal service, but can certainly be done to the model. The other difference is not one so much you have to decide about, except perhaps it's one of the criteria you use for judgment and that is the Hatfield Model, alone of the models, does have a specific detailed model for what the interoffice network looks like.

The Telecom Economic Cost Model, I, like you, heard a great deal said that I'd not heard before. I must say, I think the challenge it faces is the following: It has tremendously useful interfaces, obviously. You can set — if you were here Monday, by boxes you can set a lot of things like these market shares and the like. What we didn't hear too much of was, what is the internal workings of the model? So, perhaps the challenge now is, is the model calculating things and how is it calculating things compared to the other two models, because the best interface in the world is only as good as the substance that underlies the model. And I, at least, felt that I didn't hear a great deal about that.

As far as the comparisons with embedded cost models, it seems to me the Joint Board has already made its motion in that area. It's looking at proxy cost models. It should be looking at proxy cost models. If the inputs are right, the model outputs are right.

I guess I'd conclude then by saying, I realize that your time is short. That kind of leads me to two conclusions. One is, you obviously have to zero in on a model that can support your needs. I would suggest to you that the model than can both calculate universal service costs, unbundled elements and access charges on a consistent basis in the long run may not be the narrow need of this group, but could be very important before the whole process is over. And secondly, I guess in light of the time is short, a lot of comments have been made. Lisa is

absolutely right about the fact the model does not have a fully loaded data base for independents and I'd suggest that at least for now that's appropriate, that allows you to move forward with what you have to move forward with. Creating the input data base is not a massive task, it just hasn't been done given the time that's been allotted so far.

Why do we believe that Release 3 is the best choice? It calculates universal service, unbundled elements and access in a consistent model in a consistent way. It provides more user flexibility. Many, many inputs of all of the kinds that were discussed today, cost of capital, depreciation, element costs, fill factors, you name it. And, finally, it does so, we believe with more accuracy than the other models that we've heard presented. So, that would be my wrap up for the day's meeting.

David Krech, FCC

Thank you. Glen Brown from U S West will be doing concluding remarks for the BCPM.

Glen Brown, U S West, Inc.

If this is the closing ceremonies and we're the third one to the podium, do we get the Gold? (Laughter) Thank you, David, and I would like to thank the Joint Board staff and the Commission staff for putting on these workshops. I think a lot of people learned a lot; I know I did. I'd like to thank you and Bob Loube and Bill Sharkey and Emily Hoffnar for putting together

some real diverse panels, that I think got a lot of really good information on the table, a lot of good ideas, and a process that I think has the potential for getting to where we need to go in the time that we have get there. Sometimes deadlines can be very effective managerial tools.

There was a lot of discussion about inputs. And I agree, the inputs are a very, very important part of the process. There are a finite number of areas in terms of cable, central office switch, expenses, that we ought to be able to take both or all three models, put the default inputs on the table, look at the documentation for it and come to some — and also with a touch of reality, what is real, what's happening, and come to a good decision. I think the ideas around beginning to break through the veil of list prices for equipment. I've heard some good ideas here. We are going to need help from the Commission. But I think if we work together, we can get there.

I disagree, though, with something else that's been said a few times here and that's that the inputs are the only thing. Because these models design networks, and it's critically important that these networks work, there are some fundamental things that have to work. There has to be a physical facility to every home and to every business. That ought to be fairly easy to check. We have transmission requirements we need. We have the engineering design rules that I spoke about earlier. There needs to be some validation of that, and at least in 2.2.2, we strongly believe, and we'll be bringing in engineering expertise

to demonstrate, and hopefully to help get the models right, why it doesn't and what changes will be needed; or, alternatively why BCPM gets there. But keep in mind that while the inputs are very important, we also need to look at some of the fundamental network design rules.

Next, consistency is important. The Joint Board decision said that forward-looking costs that would approximate what an efficient new entrant would incur are the right standard for funding universal service. We could argue that, but I think we're past that. But I think it is important, as a number of the experts said, that we be consistent. We either consistently look backward at investments, capital costs, expenses, or we consistently look forward. And, now, an area where this got a lot of attention in front of this group is in the area of cost of capital. And I heard Rich Clarke, I heard Susan Baldwin say, well, you know, it's probably okay to use the monopoly capital cost parameters because we're talking about basic service. We're talking about universal service. But, Bob said it just a minute ago: These models are set to size the Universal Service Fund which we bracketed it between \$5 billion and \$15 billion, but also to re-price access charges which AT&T and MCI, the sponsors of Hatfield pay to the tune of \$21 billion, and to set the price for unbundled network elements which, who knows how big they're going to be? If they reach some of the projections, they could be substantial, but also are going to influence how that market evolves. So, I think the kind of validation ideas that have been kicked around make sense.

I talked about four reality tests: an economics test, an engineering test, a computer code test and a smell test. Joel said it very well — Hold the results up to the light. Do they make sense? And I think we've got enough ideas on the table to get there.

Finally, what I'd like to say is, let's not lose sight of the customer in all this, okay? Because whatever network our proxy model develops, if, indeed, it does set prices for access and the use of the network and indeed does fund the provision of service to high-cost-to-use customers, that's going to become the network standard *de facto*. That's what people will build to.

So, I'll end on the theme that I began. It's important to get it right. BCPM is providing to the FCC and the Joint Board the code for our model, no strings, no locks. We want to work with you and with all of the good talent that we've seen in the past two days to get this right. Thank you.

David Krech, FCC

Thank you, Glen. And we appreciate that generous offer of working with us. We are looking forward to seeing the models. I believe, I think we have commitments on videotape here of January 31 from both sides. We'd like to remind them that when they do file that with us, that they make sure to send those to our state regulators on the Joint Board staff and also provide them to the FCC staff. I anticipate that when that happens we will definitely be having public comment on the models.

Before we move on to that, I have a few things I want to do. I want to thank all the panelists who served over the past couple of days. I appreciate the time and energy that you put into being here. Having to make travel plans for a lot of you, missing out on other things that you could be doing, I think the input that we received over these past couple of days was very helpful. The panelists gave us very good insight. Clearly they knew what they were talking about. They'd given some substantial thought to the questions before them and before the Joint Board.

I would like to thank Gina Keeney, our Bureau Chief who came up and spoke to us briefly yesterday, and Commissioner Ness who stopped by earlier today. I think that their coming here shows a level of interest within the Commission, and the Commission realizes the importance of deciding these proxy models, the importance of this universal service proceeding.

And, the one person who probably deserves the most thanks, and the person with this whom this could never have happened that you may have seen running in and out is Ashford Carlson. She's done all the behind-the-scenes work that has made this workshop happen, setting up the room, getting the panelists' names straightened out, getting the tables, being the point person for the people who requested to be on panels. I want to thank Ashford for her hard work on this.

As you can tell from what we've learned over the past couple of days, we have got a hard task in front of us. And there's been a lot of discussion about a May 8 statutory deadline. We

have deadlines, actually, that come before that. And one of the things that the state people have asked me to make sure everybody realizes is that in the Joint Board Recommendation, you know, the states are going to be providing a report to the Commission prior to May 8 with their recommendations on the proxy models. So we're not looking at May 8; I wish we had until May 8. We're actually looking at a quicker deadline, and as you can tell we have lots of serious issues here.

We look forward to getting the models on January 31. Needless to say, we wish it could have been January 1, but, you know, we'll have to make do with what we can as soon as we can get it. For those of you that are truly proxy model junkies, I want to point out, once again, that this proceeding has been done on videotape, it is being put in the record. So, all those things that you said that you realized and wished you hadn't said, it's too late, in terms of the panelists. But the other point is, you know, if you have friends, family that you think want copies of this, they are available. (Laughter) I understand they would make excellent Valentine's Day gifts for spouses or significant others.

While we realize there's been a lot of people here in the audience and a lot of people on the panels that are very interested, we also realize that there are people that haven't been able to attend. They will have an opportunity to see the tapes. We also realize there are people who have been able to attend that maybe couldn't make a point that they wanted to make,

panelists from the first session who really thought of something wonderful this morning. We have released a public notice this afternoon allowing for people to file comments on the workshops. If you want to supplement what you said, if you have information about issues that were raised that you'd like to put in the record, we are setting a January 24 date for those submissions. There's also information in the public notice about how you can get hold of the videotapes for your loved ones, other loved ones, friends, family, enemies, whoever, that may also want to submit comments on this.

There's been a lot of request for written copies of the questions that were asked of the panelists. Both the questions and the public notice should be on the table out in the lobby by the elevators for people who care to pick those up.

At this point, I want to again thank everybody for coming. It's been a very useful process. Unfortunately, it's not the end of the process. Unfortunately, nobody — we didn't have a good wrestling match, and we don't have a winner standing at the end. We have a lot of work ahead of us, but it's going to be fun and interesting work. And, thank you very much.

(End of Wednesday's Session)